User manual

SurALux - Light Curing Box 8201

Updated 15th July 07

1.0. SurACer® 4450: specifications in brief (see Product Information)
The SurACer® 4450 makes it possible to upgrade advertising materials innovatively with its combinations of materials and processes.

- Components with no isocyanates → skin irritation and environmental hazards eliminated
- Cured under light → rapidly hardened
- Stable when mixed → easy to handle
- Highly transparent → 3-dimensional in effect
- Resistant to weather and UV light → suitable for outdoor use
- Highly adhesive → enduring bond
- Very flexible → multiple applications

Under the SurALux curing light 8201, SurACer® 4450 hardens so quickly that the material is ready for delivery much sooner and thus more cheaply than has been the case for earlier comparable products. The advantages include environmentally friendly storage and disposal, and the fact that transport by mail services is risk-free. SurACer® 4450 is distributed in convenient, reasonably priced quantities which involve no additional costs.

2.0. SurALux - Light Curing Box 8201
The SurALux Light Curing Box 8201 is the means of curing coatings made with SurACer® 4450. The result will be see-through coating of the substrate, crystal clear and highly flexible. The substrate may have been produced by silkscreen printing, inkjet, dye-sublimation or printed transfers. SurACer® 4450 will coat all these. The material of the substrate may be polyester, PVC sheets, metallic films, moulded aluminium or other moulded shapes.
All these can be given an aesthetically attractive gloss by being printed and then domed with SurACer® 4450.

2.1. Technical data

Input voltage:	230 V AC
Working voltage:	12 V DC
Size:	545 x 520 x 215 mm
Exposure time:	between 5 and 8 minutes, depending on size of motif and thickness of coating
Area treated:	up to A3+, 500 x 400 mm
Standards:	CE mark
UV light:	ten 36-Watt tubes (giving UVA exposure and visible light)
Fuse:	5 amp
Scope of delivery	One SurALux 8201 core apparatus (see Fig. 1) One 220 V cable with plug Two A4 backing sheets One user manual

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3.0. Commissioning

- Remove transport safety devices from the shunt and check the box for visible defects and for completeness of contents
- Plug the cable into a 230 V socket.
- Switch on the box with the On/Off switch.
- 5 -- -- 5 -- -- appears on the display. The 5 on the right indicates the curing time pre-set by the manufacturer (5 minutes).
- Pull the shunt open until it meets the stop.
- The coated sheets must be attached to the backing sheet by means of spray fixative.
- Place the backing sheet into the tray of the shunt and push it closed.

Fig. 1: Controls of the SurALux 8201 Light Curing Box

Fig. 2: SurALux 8201 Light Curing Box with tray of the shunt pulled to open position.

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3.1. Using the timer to set the curing time

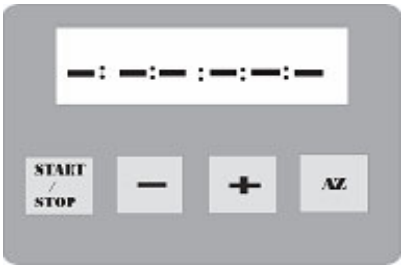

Fig. 3: SurALux 8201 timer

Using the “+” and “-“ keys, set the curing time desired. The maximum curing time that can be set is 10 minutes.

3.2. Starting and stopping the curing process
Start the timer by pressing the Start/Stop key. This starts the curing process. Whatever the set time, it is possible to interrupt the curing process by pressing this key again at any moment. The internal cooling fan will start up automatically after approximately 3 minutes and will remain in action up to the start of the next curing cycle. The decreasing curing time is displayed. When the curing process is finished 5 - - 5 - - appears on the display and there will be an auditory signal.

3.3. Factors that influence the necessary curing time

- the thickness of the coat to be cured
- the size of the area to be cured
- the type of film used
- the temperature of the SurACer® 4450

Try out the curing of SurACer® 4450 on labels with a diameter of 2.5 to 3 mm and coating thickness: between 1.4 and 1.5 mm.

3.4. Guidelines for exposure time

Type	Coating thickness	Surface	Approximate time
Label	1,0 – 2,0 mm	1 – 10 cm²	5 min
Label	1,5 – 2,0 mm	1 – 100 cm²	7 min
Text	1,5 – 2,5 mm	bis 60 mm height	5 min
Text	1,5 – 2,5 mm	> 60 mm height	1+1+5 min
Surface	1,0 – 2,0 mm	d = / < 60 mm	5 min
Surface	1,5 – 2,5 mm	d>60<150 mm	1+1+1+5 min

Always experiment to check out that these examples of application apply to the current case.

Check curing by pressing a fingernail into the coated surface. If the pressure mark is no longer visible after a short time, the curing is complete. In case of doubt, cut

through the label to ascertain that it is hard throughout. If this is not the case, the curing time must be extended a minute at a time. Over-curing by setting the time too long will do no harm.

Note: where bigger surface areas are involved, the curing time can be divided up to avoid damage to the surface. Example: 7 minutes = 1 + 1 + 1 + 4 minutes
The principle for the curing process
is that a section has been completely cured if further exposure no longer alters the degree of hardness of that area and the surface is no longer sticky.

3.5. General Notes
At the end of the exposure time, pull the shunt open until it meets the stop. The ventilation will continue and so dissipate the heat from the exposure cavity.
If there is too much heat in the exposure cavity, the coating material will be reactive on insertion. It is therefore necessary always to ensure adequate heat dissipation by leaving the box open for long enough. The tray of the shunt should thus stay open at least until the next curing process is started.
At the end of a period of operation, the SurALux Light Curing Box 8201 should be fully cooled before the On/Off switch is turned to Off.
Never attempt to cure without using cold (or at most lukewarm) backing sheets made of aluminium or glass.
There must be a space left between the backing sheet and the bottom of the shunt.
The backing sheets supplied must be sprayed with have to be treated with removable spray fixative before film is placed on it.
The film (from which the squared backing foil has been removed) is placed on the backing sheet.

To coat it with SurACer® 4450 doming material, connect the DG 8301 applicator to the mains, connect the airline between the KK 8440 compressor and the applicator and then between applicator and cartridge.
Seal the end of the cartridge with the needle plug, fill the SurACer® 4450 with coating material, insert the piston and close it with the variable cartridge grip. Then hold the cartridge pointing upwards, remove the needle plug and insert a dosing needle.
Set the necessary air pressure, prepare to press the foot control but do not do until so the cartridge is aimed at the label with the power of the needle at the label centre.
The shot of doming material will diffuse to the edge on its own; if required, more can be added to achieve the right coating thickness.

correct incorrect

It is possible to make the SurACer® 4450 material a little more runny by warming it first in warm water.

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Air may get into the SurACer® 4450 material in the course of application. Prick any bubbles with a knife–point or other metal (or glass) pointed object.
If the SurACer® 4450 material overshoots the edges of the label slightly, it will retreat. Larger-scale overflows can be removed with a suitable tool, such as a spatula or stylus.
If large quantities of SurACer® 4450 are spilt, they can be blotted up and wiped away with absorbent cloth or paper. The coating task will have to be started anew.
SurAChem 5380 should be used for cleaning up the surface, as it may be destroyed by other cleaners.
The intensity of the exposure may decrease after a certain time.
If the curing time exceeds 10 minutes, it is recommended that the lamp be replaced.
Always act in accordance with the product description.

4.0. Further important functions of the timer

4.1. Reading out how long the lamps have been in use

1. Switch the box on
2. Then press the AZ key
3. The period of use appear on the display in hours, minutes and seconds

4.2. Re-setting the total period of lamp use to zero

1. Plug in the box
2. Press and hold down the AZ key
3. Switch the box on
4. Now release the AZ [Symbol einfügen!] key

The box is ready for use.

4.3. Pressing the AZ key while the lamp is on

1. The lamps are functioning
2. If the AZ key is pressed, the box will switch itself off and the curing process will be interrupted
3. A “P” will appear on the display to signify Parking. The figure after the “P” is the exposure time which has been set. After the dot, the remaining exposure time is displayed
4. When the Start/Stop(p) [Symbol einfügen!] key is pressed, exposure will continue

If continuous curing is the plan, this method of switching on and off is not recommended.

4.4. Electricity cut

1. Switch off the box
2. When the electricity returns, switch the box on again.
   The display will show 5 - - 5 - -
3. Do the necessary programming for the curing process and press the Start/Stop key.

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4.5. Resetting

1. The box is switched off.
2. Press down the AZ key.
3. Switch on the box by using the On/Off key.
4. After a short time release the AZ key.

All current values are deleted apart from how long the lamps have been in use.

4.6. Changing the tubes:

1. Switch off the box and disconnect the plug from the mains.
2. Warning: The box heats up during the curing process.
3. Before being opened to have the tubes replaced, the box must without fail be allowed to cool sufficiently.
4. Turn the box through 180 ° and lay it carefully down on its upper side.
5. Carefully unscrew the bolts for the lower part of the box and remove the bottom section of the housing.
6. Pull out the shunt, remove the clips and take the tubes out of their sockets.
7. Put in the new tubes and reassemble the box in reverse order of the instructions above.

Note (tube replacement):
If only one of the lights is being replaced, the total numbers of hours registered by the timer should not be reset.
If there is an electricity cut, the procedure as in 4.4 must be followed when the box is next used.

5.0. Guarantee, transport

5.1. The SurALux light curing box 8201 is guaranteed for 24 months from the date of purchase. (For repair or replacement it must be returned to the manufacturers at the purchaser's cost.).

5.2. The guarantee covers:

1. faults in the box such as defective materials, functions or workmanship.
2. damage to the box during transport.

5.3. The guarantee does not cover:

1. faults caused by faulty operation, improper use, abuse of the equipment or wear and tear (which applies also to the lights and fuses
2. incorrect assembly or the insertion of parts not obtained from the manufacturer.
3. claims for replacement of materials, consequential damage or loss of production.

5.4. Damage sustained during transport and anything missing from the goods supplied must be notified immediately in writing to the supplier, whose fax number is +49 3641 352929.

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The damage and incompleteness must also be reported to the delivery company and the seller. For the rest, the sellers terms and conditions of business and guarantees will apply.

5.5. If it is necessary to return the box to the supplier, this is only permitted in the original packing and on a disposable palette, with functional transport safety devices. The box must be placed upside down, i.e. with the adjustable feet facing upwards; on the pallet. If the original packing is not used by the customer for return of the box, any damage during transport will be charged to the customer and invoiced accordingly. Exchange or replacement of accessories or repair will be organised via the seller.

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